



NAVAIRINST 5400.67B
AIR-540/044
24 Mar 93

NAVAIR INSTRUCTION 5400.67B

From: Commander, Naval Air Systems Command

Subj: CERTIFICATION PROGRAM FOR NAVAL AIR SYSTEMS COMMAND GUIDED
WEAPONS TEST SYSTEMS

Ref: (a) DOD Directive 5000.2, Defense Acquisition, 23 Feb 91

1. Purpose. To define procedures and assign responsibilities for a formalized and coordinated program for the certification of Naval Air Systems Command (NAVAIR) guided weapon factory acceptance test systems in consonance with reference (a).

2. Cancellation. This instruction supersedes NAVAIR Instruction 5400.67A of 3 November 1983. Since this is a major revision, changes have not been indicated.

3. Scope. This instruction applies to automatic and manual test systems used in the testing of new production guided weapons and their integral components as procured by NAVAIR. This includes the Consolidated Automated Support System (CASS) and its associated Test Program Set (TPS).

4. Background. Mission success depends, to a great extent, upon the operational readiness of weapons. Confidence in operational readiness can only be assured through the use of test systems as the known standards at production acceptance, at mission initiation, and at other times when the condition of the weapon requires evaluation. Confidence in a weapon stockpile and probability of mission success are therefore highly dependent upon the integrity of the weapon test system. To provide an acceptable degree of assurance that weapons with a high probability of success are procured and/or issued to the fleet, it is necessary to establish controls and disciplines over the weapon test systems. These controls and disciplines will ensure that test processes are controlled and follow prescribed acquisition test criteria.



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FAX TRANSMITTAL

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5. Definitions. For purposes of this instruction, the following definitions apply:

a. Certification. Confirmation, by demonstration, that a test system is capable of correctly assessing the quality of the items to be tested. This confirmation is based on an evaluation of all test system elements, establishment of acceptable correlation among similar test systems, and satisfactory long-term performance and stability based on test data trend analysis.

b. Certification Review. An on-site review conducted to assure that the test system continues to correctly assess the quality of the items tested and their ability to meet specified test requirements. A certification review is normally scheduled when test system performance, as observed during analysis of test data or self-test data, indicates possible test system degradation or when there has been a major change/modification to the test systems hardware or software.

c. Correlation. That portion of certification which establishes the mutual relationships between similar test systems by comparing test data collected during routine tests, on specimen hardware, or on simulators.

d. Trend Analysis. Monitoring and analysis of long-term test system performance and stability based on statistical process control of acceptance test data.

e. Test System. A measurement system used to assess the quality of material, consisting of the following elements:

- (1) Test set hardware and ancillary equipment.
- (2) Software/Firmware.
- (3) Supporting documentation (drawings, specifications, procedures, and other publications).
- (4) Installation and operating environment (facilities power, environment, safety, etc.).
- (5) Supporting programs (calibration, maintenance, configuration management, and quality assurance).
- (6) Operating personnel.

f. Certifying Activity. The activity which is authorized by NAVAIR Systems and Engineering Group (AIR-05) to perform the certification function and issue letters of certification. Certification authority is vested in the commanding officer of the designated activity or his/her designated representative.

6. Policy

a. The Naval Warfare Assessment Center, Corona, California, is the certifying activity for designated test systems used during production acceptance of new production guided weapons and their integral components as procured by NAVAIR.

b. Designated test systems will be certified before being used to test weapons and their included subsystems for acceptance at the factory and production monitoring facilities.

c. Designated test systems required for factory acceptance and production monitoring will be subject to periodic certification review. Once a test system is fully certified, the certifying activity will monitor the test system configuration baseline for modifications to hardware or software which might nullify the certification. The certifying activity will also analyze acceptance test data for signs of performance degradation within the test system. Should either of these events indicate a problem sufficient to nullify certification, a certification review will be scheduled. Production process control anomalies which may be reflected in test data will also be reported.

d. Designated test systems which do not meet all requirements for full certification, but which may be used to adequately test production assets during an interim period for completion of corrective action, will be certified conditionally. The certification activity will provide Weapons Engineering Division (AIR-540) and the test system user with a list of conditions to certification at the time of conditional certification.

e. Certification requirements will be summarized in a standard certification guide and will be made available by the certifying activity upon request.

f. Certification will be documented by official correspondence and signed by the certifying authority or his/her designated representative.

g. Certification does not relieve the operating activity of the responsibility for the maintenance, calibration, and continued satisfactory performance of the system.

h. Delegation of certification authority may not be made without prior approval of AIR-05.

i. All designated test systems for a given weapon will be certified by the same certifying activity.

j. Plans for certifying test systems required for factory acceptance or production monitoring will be prepared and approved as part of the data package procured under the development task or contract.

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k. The test system certification activity for each weapon will be designated at the initiation of the test system engineering development.

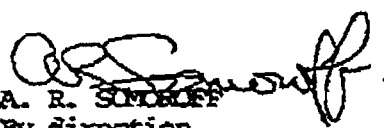
l. The certification activity will be designated as the principal technical agent for factory acceptance and production monitoring test systems.

7. Responsibilities. The Assistant Commander for Systems and Engineering (AIR-05) is responsible for the implementation and conduct of the certification program for those test systems required for factory acceptance and production monitoring.

8. Action

a. AIR-05 Assistant Program Managers and other technical managers will ensure that project planning and funding provide for support of factory acceptance test systems certification.

b. AIR-05, through the appropriate Assistant Program Manager for Systems and Engineering, will manage and budget program funding for certification of production related support test systems, including those required for factory acceptance, production monitoring, and final assembly checkout; and provide for the preparation and approval of documentation and data essential to the conduct of certification demonstrations.


A. R. SMOLOFF
By direction

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